

# Work Order ID 83164

**\*83164\***

Page 1

April-13-12 10:37:48 AM

Item ID: D4011-5 Accept **\*N900040100\*** Setup Start **\*NS1\***  
 Revision ID: Stop **\*NS2\***  
 Item Name: Clamp, Short  
 Start Date: 13/04/2012 Start Qty: 30.00 **\*30\*** Cust Item ID:  
 Required Date: 27/04/2012 Req'd Qty: 30.00 **\*30\*** Customer:  
 Reference:

Approvals: Process Plan: MLJ Date: 12/04/13 Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
 QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D4011	B					(43)			

100 PURCHASING 0.00  
**\*100\***  
 Waterjet Memo 0.00  
 FLOW CNC Waterjet 1-Cut as per Dwg  
 304.080 Dwg Rev: B  
 Prog Rev: B  
 2-Deburr if necessary

110 QC2- Inspect parts off machine FAI/FAIB 0.00  
**\*110\***  
 QC Memo 0.00  
 Quality Control

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Work Order ID 83164

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Page 2

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Item ID: D4011-5 Accept **\*N900040100\*** Setup Start **\*NS1\***  
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 Item Name: Clamp, Short  
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 Required Date: 27/04/2012 Req'd Qty: 30.00 **\*30\*** Customer:  
 Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
 QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120 <b>*120*</b> QC Quality Control	QC8- Inspect parts - second check  Memo	0.00 0.00				count (43)			
130 <b>*130*</b> Brake NC Brake NC	Form as per dwg NC BRAKE  Memo	0.00 0.00				(43)			S 12/05/28
140 <b>*140*</b> QC Quality Control	QC5- Inspect part completeness to step on W/O  Memo	0.00 0.00				count (43)			

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

**Work Order ID 83164**

April-13-12 10:37:48 AM

**\*83164\***

Page 3

Item ID: D4011-5 Accept **\*N900040100\*** Setup Start **\*NS1\***  
Revision ID: Stop **\*NS2\***  
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Start Date: 13/04/2012 Start Qty: 30.00 **\*30\*** Cust Item ID:  
Required Date: 27/04/2012 Req'd Qty: 30.00 **\*30\*** Customer:  
Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150	Identify as per dwg & Stock Location: <b>460</b>	0.00							
<b>*150*</b>									
Packaging	Memo	0.00							
Packaging									
160	QC21- Final Inspection - Work Order Release	0.00							
<b>*160*</b>									
QC	Memo	0.00							
Quality Control									

12/15/29  
12-05-28

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

April-13-12 10:37:52 AM

Page 1

Work Order ID: 83164

**\*83164\***

Parent Item: D4011-5

**\*D4011-5\***

Parent Item Name: Clamp, Short

Start Date: 13/04/2012

Required Date: 27/04/2012

Start Qty: 30.00

Required Qty: 30.00

Comments: IPP RevA: revB as per dwg 09.11.18 DD verified by:JLM IPP  
Rev:B 11.05.19 MADE IN HOUSE DD verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M304S14GA		Purchased	No			100	sf	99.0400	0.053	1.673684	2,		

**\*M304S14GA\***

304SS sheet .080

\*\*

B12-5-22

Location

Loc Qty

Loc Code

MAT020

99.04

117933

6.6

119276

92.44

119276

(48)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



<b>DART AEROSPACE LTD</b>		<b>Work Order:</b>	83164
<b>Description:</b> Clamp, Short		<b>Part Number:</b>	D4011-5
<b>Inspection Dwg:</b> D4011	<b>Rev:</b> B	<b>Page 1 of 1</b>	

### FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article
 ☐ Prototype

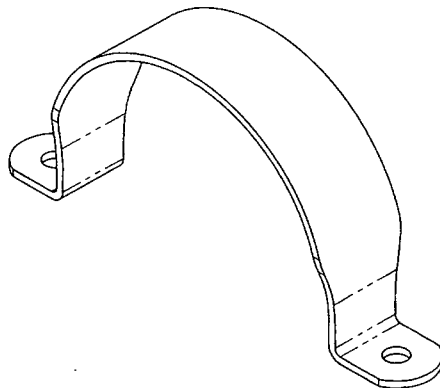
Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Ø0.257	+0.006/-0.001	0.262	2		V B02	
0.375	+/-0.010	0.377	2		V	
0.75	+/-0.030	0.756	2		V	
1.00	+/-0.030	1.008	2		V	
0.13	+/-0.030	0.129	2		V	
1.54	+/-0.030	1.54	2		V	
4.49	+/-0.030	4.49	2		V	
6.770	+/-0.010	6.772	2		V	
7.58	+/-0.030	7.582	2		V	
0.080	+/-0.010	0.074	2		V	

<b>Measured by:</b> IB	<b>Audited by:</b> J	<b>Prototype Approval:</b>	N/A
<b>Date:</b> 12-5-20	<b>Date:</b> 12/05/22	<b>Date:</b>	N/A

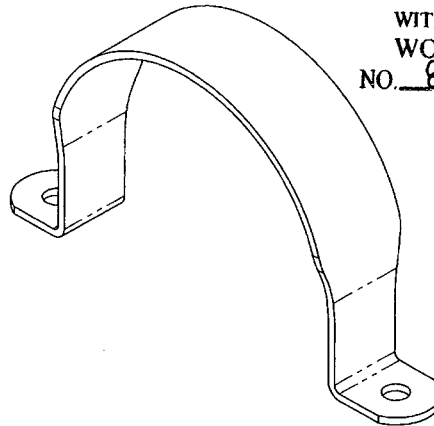
Rev	Date	Change	Revised by	Approved
A	09.12.14	New Issue	KJ	

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT

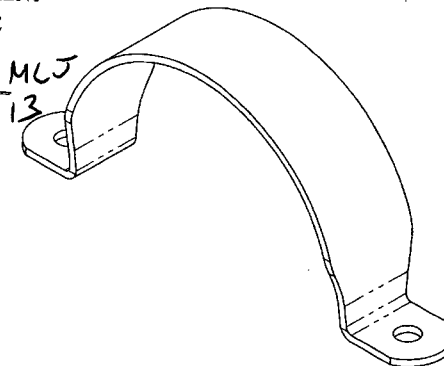
WITHOUT NOTICE  
WORK ORDER  
NO. B3164 MCLJ  
12/04/13



**D4011-1 CLAMP, SHORT**



**D4011-3 CLAMP, LONG**



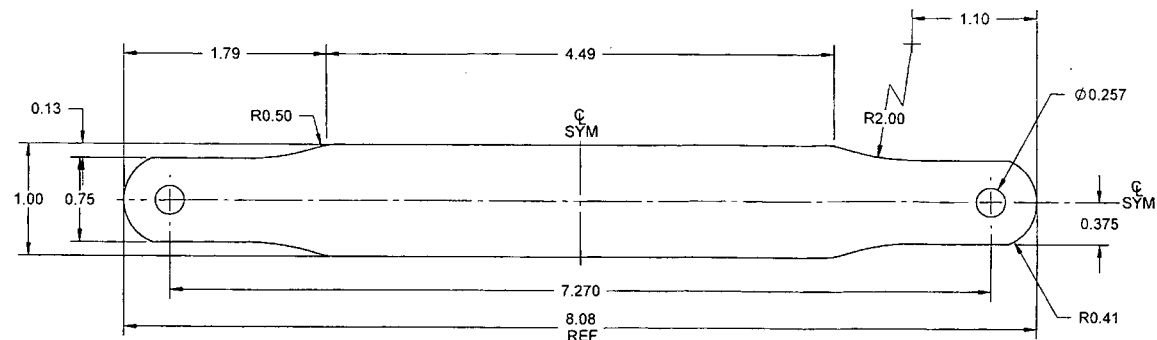
**D4011-5 CLAMP, SHORT (OEM)**

**RELEASED**  
2009-11-24  
*MP*

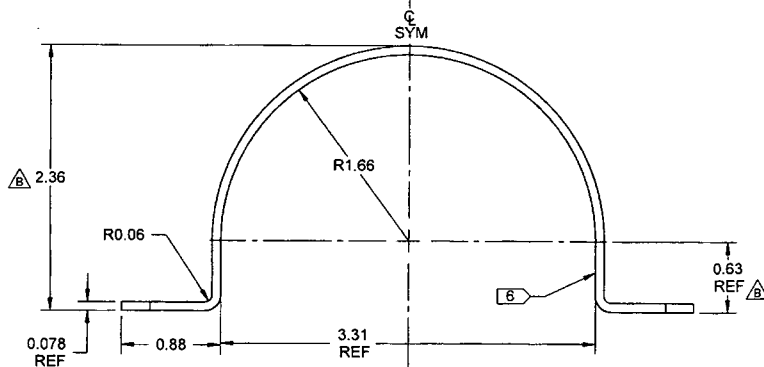
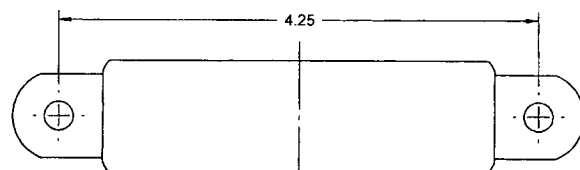
**NOTES:**

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL SHEET ANNEALED 2B FINISH, 14 GAUGE (0.078 THICK)  
PER AMS 5513 (304) OR 5524 (316) OR ASTM A240 OR ASME SA240  
REF. DART SPEC. M304S14GA
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D4011-X" USING FINE POINT PERMANENT INK MARKER
- 7) WEIGHT: 0.02 lbs EACH

B	SHORTEN HEIGHT OF -1/-3 CLAMPS BY 0.125; ADDED -5. REASON: PROVIDE MORE CLEARANCE UPON INSTALLATION ON OEM SKIDTUBES	MB	09.11.11
A	NEW ISSUE	MB	09.10.21
REV.	DESCRIPTION	BY	DATE
DESIGN	<i>JS</i>	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	<i>JS</i>		
CHECKED	<i>JS</i>	DRAWING NO.	REV. B
MFG. APPR.	<i>JS</i>	<b>D4011</b>	SHEET 1 OF 4
APPROVED	<i>JS</i>	TITLE	SCALE
DE APPR.	<i>JS</i>	<b>CLAMP</b>	NTS
DATE	09.11.11	COPYRIGHT © 2009 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR CHANGED WITHOUT THE WRITTEN PERMISSION FROM DART AEROSPACE LTD	



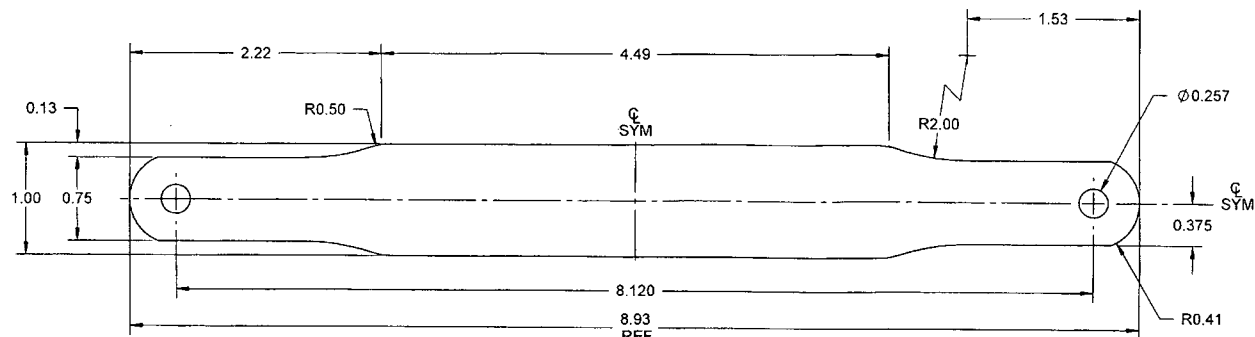
**D4011-1F CLAMP, SHORT FLAT PATTERN**



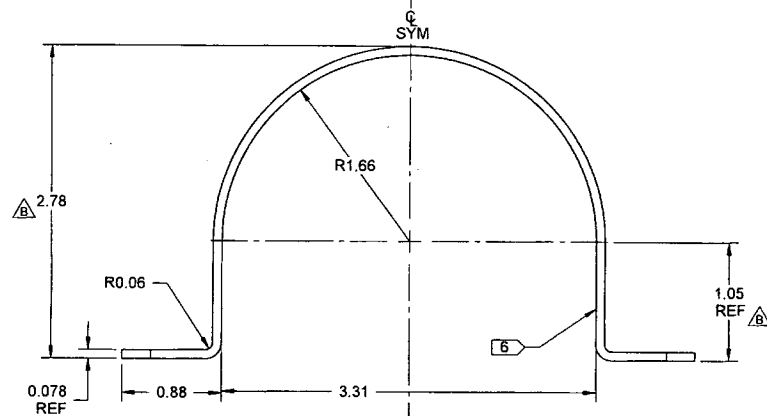
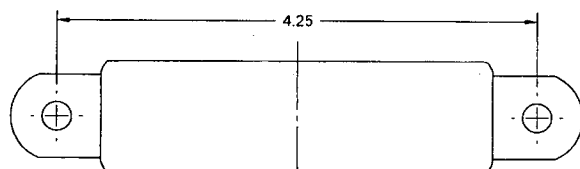
**D4011-1 CLAMP, SHORT  
(MAKE FROM D4011-1F)**

**RELEASED**  
2009-11-24  
MP

DESIGN		<b>DART AEROSPACE LTD</b>	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED	AS	DRAWING NO. <b>D4011</b>	REV. B
MFG. APPR.		SHEET 2 OF 4	
APPROVED		TITLE	SCALE
DE APPR.		<b>CLAMP</b>	NTS
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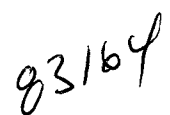
**D4011-3F CLAMP FLAT PATTERN, LONG**



**D4011-3 CLAMP, LONG**  
(MAKE FROM D4011-3F)

**RELEASED**  
2009-11-24  
MP

DESIGN	1	<b>DART AEROSPACE LTD</b>	
DRAWN	1	HAWKESBURY, ONTARIO, CANADA	
CHECKED	ALS	DRAWING NO. <b>D4011</b>	REV. B
MFG. APPR.	1	TITLE <b>CLAMP</b>	SHEET 3 OF 4
APPROVED	1	SCALE	
DE APPR.	1	NTS	
DATE	09.11.11	<small>COPYRIGHT © 2005 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	



Technical drawing of a mechanical part, likely a bracket or flange. The part is symmetrical about a vertical centerline. It features a central rectangular body with rounded ends. On each side, there is a circular feature with a crosshair indicating a hole. A dimension line above the part indicates a distance of 4.25 units between the centerlines of the two circular features.



RELEASED  
2009-11-24

DESIGN	<i>1</i>	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA  DRAWING NO. <b>D4011</b>  TITLE <b>CLAMP</b>  COPYRIGHT © 2009 BY DART AEROSPACE LTD <small>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL. IT IS LOANED TO YOU BY THE ISSUING COMPANY. IT IS NOT TO BE LOANED TO ANY PURCHASER OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT THE WRITTEN PERMISSION OF DART AEROSPACE LTD.</small>	REV. B
DRAWN	<i>1</i>		SHEET 4 OF 4
CHECKED	<i>ELS</i>		
MFG. APPR.	<i>N</i>		
APPROVED	<i>20</i>		SCALE
DE APPR.	<i>#</i>		NTS
DATE	09.11.11		

